

RCP6(S)W-RA4C

Dust/
Splash-Proof
SpecBattery-
less
AbsoluteMotor
Unit
TypeCoupled
MotorBody Width
40
mm24V
Pulse
MotorModel
Specification
Items

Series — Type — Encoder Type — Motor Type — Lead — Stroke — Applicable Controller/I/O Type — Cable Length — Options

RCP6W: Separate Controller
RCP6SW: Built-in Controller

WA: Battery-less
Absolute

35P: Pulse
Motor
35□□ Size

10: 10mm
5: 5mm
2.5: 2.5mm

50: 50mm
200: 200mm
(Every 50mm)

[RCP6]
P3: PCON
MCON
MSEL
P5: RCM-P6PC
(Coming soon)
[RCP6S] SE: SIO Type

N: None
P: 1m
S: 3m
M: 5m
X□□: Specified Length
R□□: Robot Cable

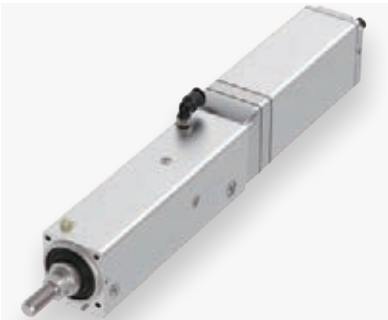
Please refer to the options
table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.19 for more information about the model specification items.



*Some limitations may
apply to horizontal/
side/ceiling mountings
depending on the
model. See page 204.
Please contact IAI for
more information.

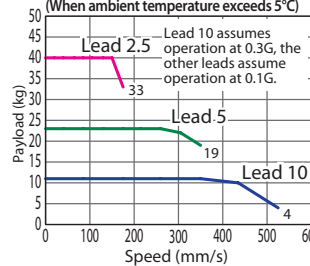


Correlation Diagrams of Speed and Payload

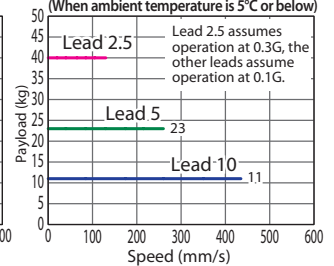
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA4C Horizontal mount
(When ambient temperature exceeds 5°C)

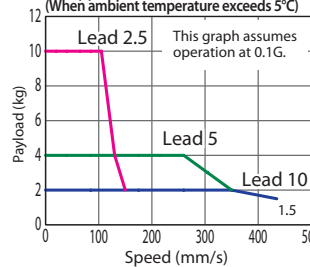


RCP6(S)W-RA4C Horizontal mount
(When ambient temperature is 5°C or below)

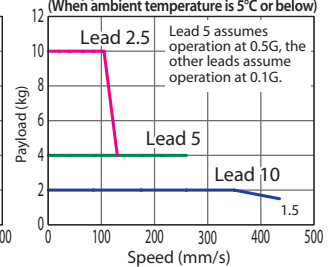


High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA4C Vertical mount
(When ambient temperature exceeds 5°C)



RCP6(S)W-RA4C Vertical mount
(When ambient temperature is 5°C or below)



- POINT Selection Notes**
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
 - (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
 - (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
 - (4) Please refer to P.205 for performing push-motion operation.
 - (5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Actuator Specifications

Lead and Payload

* Push force only available during push mode w/ limited speed.

Model Number	Lead (mm)	Max. Payload		Max. Push Force (N)*	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP6(S)W-RA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use.
Values in brackets [] are when ambient temperature is 5°C or below.

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		R16 (16m) ~R18 (18m)
	X16 (16m) ~X18 (18m)		—

* The total length of the actuator cable and the actuator/controller connection cable must not exceed 20m.

* Please refer to P.267 and 281 for more information regarding the maintenance cables.

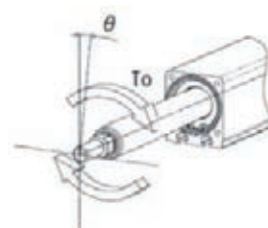
Options

Name	Option Code	Reference Page
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

Actuator Specifications

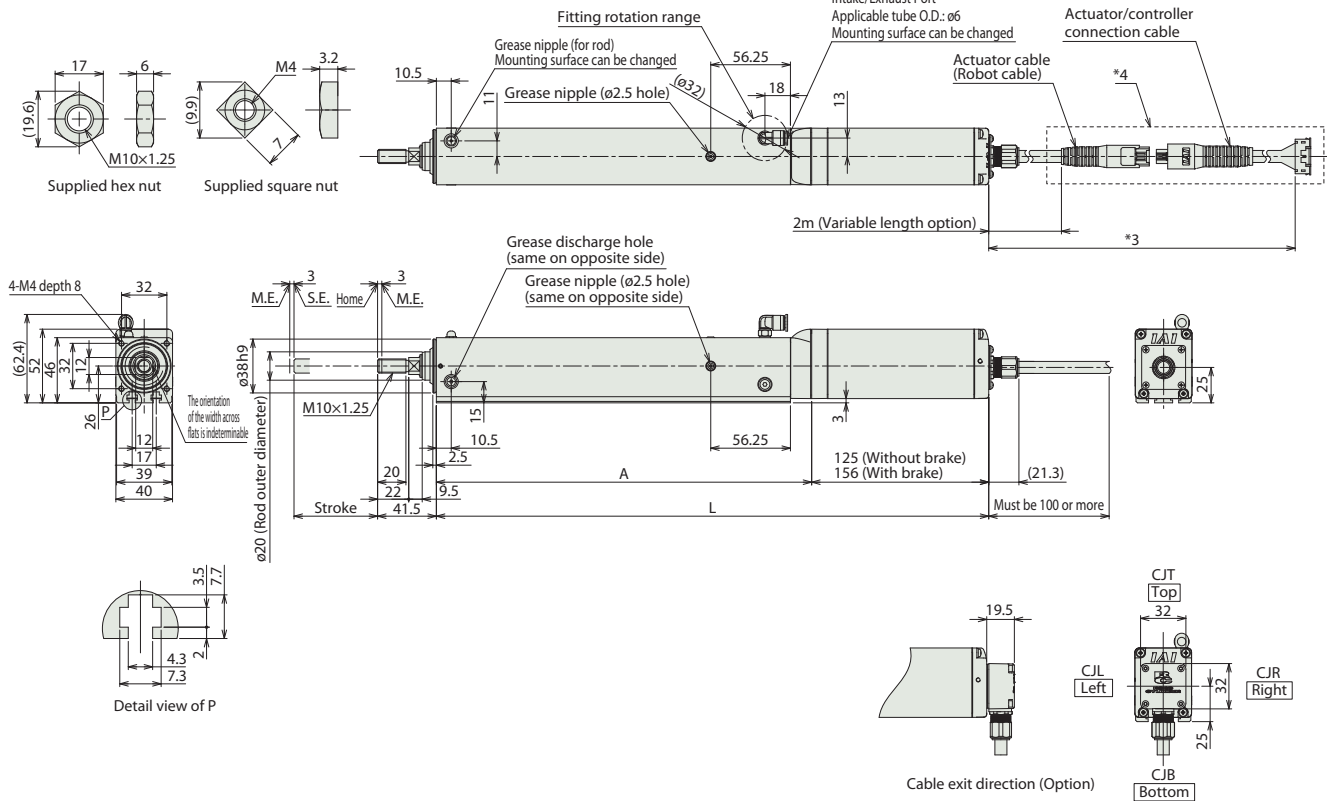
Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ø20mm
Allowable static torque on rod tip	To: 1.0N·m
Max. angular displacement on rod tip (*1)	θ: ±1.0 deg.
Protective structure	IP65 (IEC 60529)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

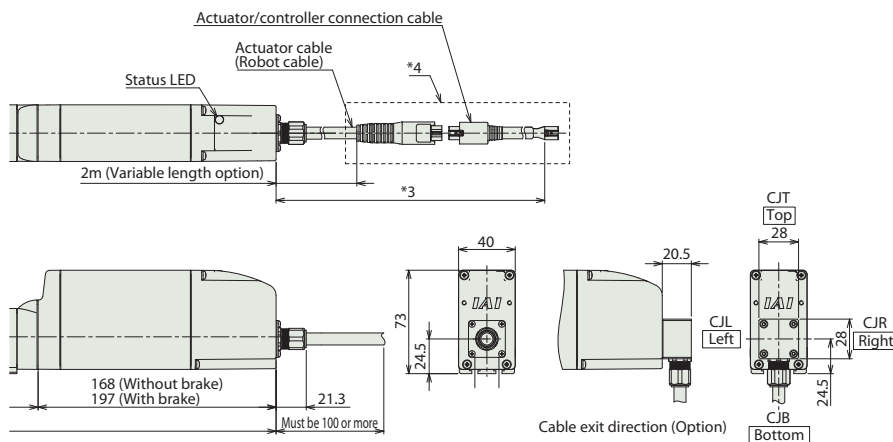


*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA4C



- *3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
- *4 The cable joint (connector) within the dotted line is not splash-proofed.
- *5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L	RCP6W	w/o brake	288	338	388	438
		w/ brake	319	369	419	469
	RCP6SW	w/o brake	331	381	431	481
		w/ brake	360	410	460	510
A			163	213	263	313
Mass (kg)	RCP6W	w/o brake	1.4	1.6	1.8	2.0
		w/ brake	1.5	1.7	1.9	2.1
	RCP6SW	w/o brake	1.6	1.8	2.0	2.2
		w/ brake	1.7	1.9	2.1	2.3

* Please refer to P.249 for more information on component materials.

Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.270 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB (*)		1	DC24V	● * Option	● * Option	—	Network cannot be selected	64	—
PCON-CB/CGB		1		● * Option	● * Option	—	DeviceNet CC-Link EtherCAT EtherNet/IP	512 (768 for network spec.)	Please see P.255
MCON-C/CG (**)		8		This model is network-compatible only.			CompoNet	256	Please see the MCON-C catalog or manual.
MCON-LC/LCG (*) (**)		6		—	—	●	Note: - The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	—
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	—	—	●		30000	Please see the MSEL catalog or manual.
RCM-P6PC (*)		1	Usable within the RCP6S Gateway system.					768	Please see P.277

(*) Coming soon. (**) For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.